Defense Report from AUSA's Institute of Land Warfare

Building Readiness to Sustain Global Responsiveness and Regional Engagement

Introduction

As instability accelerates worldwide and global demands for the Army are increasing, associated reductions in fiscal resources place a premium on creating unit readiness more efficiently. However, the inability to apply leading indicators contributes to the inefficient application of resources, reducing the Army's ability to respond with ready units. Largely this problem persists because U.S. Army readiness reporting employs a metric-based methodology using lagging indicators that do not support a projection of unit readiness. Given the postwar challenges and rapidly evolving security environment, the Army requires a methodology to more efficiently and responsively project unit readiness based on leading indicators.

A leading indicator is defined as a probable quantity of fulfillment as measured against a validated quantity of demand. The use of leading indicators will enable the Army, acting as an enterprise, to gain substantial efficiency in producing ready units for global responsiveness and thereby realize significant readiness production cost avoidance. A proven private-sector technique to achieve extraordinary process efficiencies and substantial production cost avoidance is a leading-indicator-based production methodology known as "Demand-Fulfillment."

To build unit readiness and sustain Army global responsiveness and regional engagement, this paper argues for the application of the Demand-Fulfillment methodology based on leading indicators for manning, equipping, training, services and infrastructure and funding.

Current Total Force Methodology

Although unit readiness is clearly the responsibility of a commander, there is only one readiness component over which a commander has control—training. A commander does *not* man the unit (except in reserve components); a commander does *not* equip the unit; a commander does *not* provide services and infrastructure (installation-level functions) for the unit; and a commander does *not* resource (fund) the unit. Although senior commanders have some flexibility to cross-level, presently unit commanders can only report the current status of manning, equipping, training and the consequential effect on unit readiness. The principal purpose behind this approach is to assess the unit's level of training against the mission essential task list in meeting statutory readiness reporting requirements. The assessment is fleeting and useful only for a short period of time—thirty days until the next readiness report. Current reporting methodology relies upon data collected in the past and is therefore a lagging indicator of unit readiness. Even if readiness reporting were improved and became "near-real time," the focus would remain on lagging indicators and not on reliable projections of future readiness.

The Demand-Fulfillment Concept

To achieve a dynamic projection of unit future readiness, the Army must institutionalize the concept of Demand-Fulfillment. In simple terms, the concept states that a production manager issues a quantifiable *demand* for materials or services required for production output to an associated supplier that in turn responds with a complete or partial quantifiable *fulfillment* of that demand. In the private sector, the concept is applied using a methodology referred to as materiel requirements planning (MRP). The production manager must communicate the demand "signal" with enough lead time to allow the supplier adequate time to assess and report on his ability to fulfill the demand by responding with the fulfillment "signal." The production manager must

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communicate the demand signal on a timeline informed by the supplier. For instance, if a supplier needs 90 days to fulfill a demand signal, the production manager would have to issue the demand signal at least 91 days before receiving that supplier's materials or services. The methodology regards the supplier's fulfillment signal as a leading indicator. By so doing, the production manager is able to project his ability to meet his production quota for a given period of time (days, weeks or months). While day-to-day production is tracked and reported, the production projection is attained through the correlation of the production manager's *demand signal* with a supplier's *fulfillment signal*. Research reveals that application of Demand-Fulfillment in a commercial enterprise typically increases sales and order fill rates ranging from 20 to 25 percent and decreases order lead time 60 percent.* Translated to the military context, implementing Demand-Fulfillment would result in a significant increase in unit readiness in a significantly shorter time frame.

Demand-Fulfillment Applied to Readiness

As it relates to unit readiness and the application of the Demand-Fulfillment methodology, the product is a mission-ready unit (decisive action or assigned mission) and the production manager is the senior commander in concert with the unit commander. Training is the principle means by which the commander produces a cohesive, mission-ready unit. An active component commander's "suppliers" are fairly intuitive: for personnel—Commander, Human Resource Command (HRC); for materiel—Commander, Army Materiel Command (AMC); for services and infrastructure—Commander, Installation Management Command (IMCOM); and for resourcing—Headquarters, Department of the Army G-3/5/7 (Office of the Deputy Chief of Staff for Operations and Plans), with the G-8 (Office of the Deputy Chief of Staff for Programs) and the Army Budget Office.

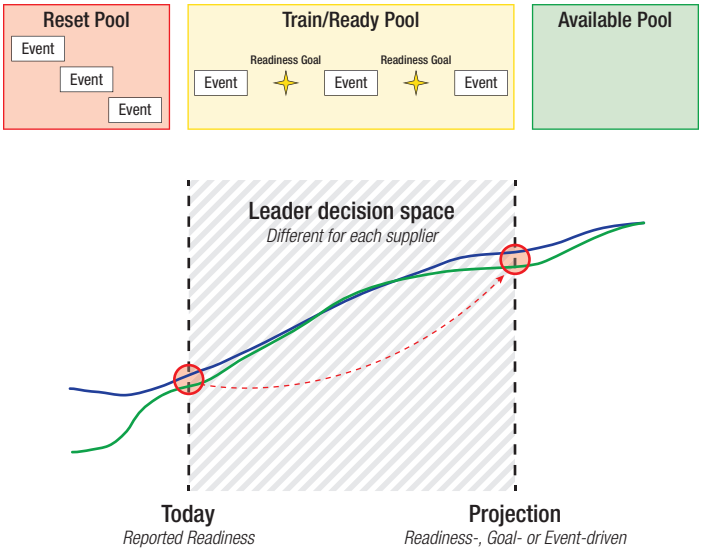
To illustrate the application of Demand-Fulfillment to the production of unit readiness, the following example presumes the suppliers need a minimum lead time of six months. Hence, the commander would issue the unit demand signal seven months in advance to each respective supplier. In turn, and within supplier timelines, each supplier would respond with a fulfillment signal indicating their ability to either partially or completely satisfy the demand. For example, the unit commander issues a demand for four field-grade officers to HRC and shortly thereafter HRC indicates its ability to provide all four or some number less than four. Should the supplier not be able to meet the demand, the unit commander and the supplier would have adequate time to resolve or mitigate fulfillment shortfalls affecting unit readiness without inhibiting or encumbering supplier time needed for fulfillment actions (six months). Most important, the unit commander (and higher chain of command) is able to focus on *leading indicators* affecting readiness within a timeframe that allows adequate decision space to either resolve fulfillment issues or mitigate risk.

To be clear, suppliers are *not* reporting readiness nor are the arguments herein advocating a new readiness reporting system. Suppliers, by providing the fulfillment signal, are responding to a demand signal levied upon them by an operating force or generating force unit commander. The diagram below depicts the application of the Demand-Fulfillment methodology to projected readiness in the Army Force Generation (ARFORGEN) process (figure 1). The methodology is applicable throughout the Total Force recognizing adjustments for reserve component suppliers.

Figure 1

Projected Readiness Concept

The commander of a unit issues a demand for personnel, commodities or services to affiliated commands, who respond with their complete or partial fulfillment of that demand.



Suppliers project fulfillment – enables leading indicators of readiness and highlights when fulfillment will fall short in sufficient time for leaders to resolve or mitigate.

Demand signal – what is required from suppliers to achieve readiness.

Fulfillment signal – what the suppliers can deliver to meet the demand.

Source: U.S. Army Forces Command

Benefits to Readiness

The most obvious benefit of associating the Demand-Fulfillment methodology with the ARFORGEN process is to *build readiness to sustain global responsiveness and regional engagement*. However, projected readiness results in three other significant advantages. First, unit projected readiness becomes a function of leading indicators. Second, projected readiness provides both unit commanders and suppliers with increased decision space in which to resolve

* Demand Driven Institute, "Fixing the Planning Problem: An Executive Summary on Demand Driven MRP," http://www.youtube.com/watch?v=J4YkKWlw9Ko.

shortfalls and/or issues with fulfillment signals rather than simply reacting to latent assessments. Third, leading indicators coupled with increased decision-resolution space greatly improves process efficiency and results in significant cost avoidance together with substantial cost savings.

Applying Demand-Fulfillment to Functional Areas

Materiel. The current decentralized materiel fulfillment methodology continues to satisfy unit demand unevenly. The methodology relies on missing, outdated, incorrect and contradictory data that require significant manually-intensive effort to reconcile, rework or override numerous stovepipe processes and disparate systems that cost the Army hundreds of thousands of dollars due to process inefficiencies. Several years ago, both Army Materiel Command and Army Forces Command (FORSCOM) recognized the importance of having a rational and consolidated materiel Demand-Fulfillment signal and have been collaborating on a "To Be" process. Extending this "To Be" Demand-Fulfillment methodology to all Army materiel stakeholders will unify the disparate processes and systems and provide a single authoritative source for materiel demand, which is then provided to the existing authoritative source for materiel fulfillment. The collaborative dynamic "To Be" process recognizes a base authorization—Modified Table of Organization and Equipment (MTOE) or Table of Distribution and Allowance (TDA)—against which varying "demand" is levied. The result is a Consolidated Materiel Demand Signal from across multiple authorization authorities as reflected in figure 2. The long-term end state is an Army enterprise process for capturing and vetting a consolidated materiel demand, which would eliminate the need for multiple, expensive "demand augmentation" processes and systems depicted in figure 2.

Figure 2

Parochial Sources for Materiel Demand

MTOE	Modified Table of Organization and Equipment
APS	Army Prepositioned Stocks
E-TDA	Equipment Table of Distribution and Allowance
PDTE	Predeployment Training Equipment
MEEL	Mission Essential Equipment List
ONS	Operational Needs Statement
JUON	Joint Urgent Operational Need
OPS Projects	Operational Projects
ORF/RCF	Operational Readiness Float/Repair Cycle Float
TSS	Theater Sustainment Stocks
BOIP	Basis of Issue Plan
LOA	Letter of Authorization
WR	War Reserves
QRC	Quick Reaction Capability
REF	Rapid Equipping Force

Source: U.S. Army Forces Command

Significant gains in efficiency (cost savings) are achieved by consolidating these parochial materiel demand signals into an enterprise Consolidated Materiel Demand Signal enabling fulfillment through a Unit Distribution Plan (UDP) by the Army's Lead Materiel Integrator (LMI).

Personnel. FORSCOM, in collaboration with HRC, is exploring an initial personnel demand signal capability incorporating the HRC personnel fulfillment signal, which projects forward in time six months. The approach replicates the materiel process successfully employed by the LMI. However, this effort would focus on delivering a consolidated personnel demand signal synchronized with the materiel demand signal to ensure the right personnel are at the unit to employ supplied materiel.

Training. FORSCOM is providing the Army enterprise with a collective training demand signal that conveys requirements for resource-constrained training events over time. The collective training demand signal is used by various suppliers that in turn provide a fulfillment signal for services such as rotations at the Combat Training Centers. The collective training demand signal is being expanded to support synchronization of additional fulfillment signals from other training support suppliers.

Services and Infrastructure (S&I). There are currently no Demand-Fulfillment signal initiatives underway. However, it is conceptually feasible to leverage the Demand-Fulfillment initiative from the personnel community to produce the population counts by installation over time. This would largely constitute the S&I demand signal. The S&I community can use this demand signal to provide the associated fulfillment signal for services such as medical services, billets/housing, dining facilities, maintenance services and training support services.

Resourcing. FORSCOM continues collaboration with the Assistant Secretary of the Army, Financial Management and Comptroller, Cost and Economics (ASA (FM&C) C&E) to use an existing ARFORGEN Cost Tool (ACT) to produce a force generation fiscal resource demand signal. The Army Fiscal Year (FY) budget would provide the resourcing fulfillment signal in terms of quantified unit operating tempo (OPTEMPO) dollars. Further, this initiative seeks to set clear linkages between the Army Force Generation resourcing Demand-Fulfillment signal to the Planning, Programming, Budgeting and Execution System (PPBES) that would establish a positive correlation with the Program Objective Memorandum (POM). By establishing the resourcing Demand-Fulfillment signal, the Army can also satisfy the requirement to provide the cost associated with the allocation of Army units during the Global Force Management process.

Conclusion

Given the postwar uncertain fiscal and geostrategic security environment, the Army requires a transformational methodology to efficiently and responsively project Total

Force unit readiness based on leading indicators. To achieve a projected readiness capability, this paper advances the proven leading-indicator methodology called Demand-Fulfillment to improve building ready units. By collapsing existing Army parochial processes and their associated information systems and transferring current investment dollars to the implementation of the Demand-Fulfillment methodology and enabling technologies, the Army can achieve projected readiness. Since the LMI has successfully applied Demand-Fulfillment and thereby increased unit materiel readiness, the same approach can be applied to the remaining readiness functional areas (manning, services and infrastructure and resourcing). The Demand-Fulfillment methodology enables the Army to efficiently build unit readiness "at best value" while sustaining effective units for global responsiveness and regional engagement.

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